

REMARKS**I. REQUEST FOR CONFERENCE**

This communication requests a conference at which applicant's attorney can confer with not only the primary examiner but also with his supervisor and any other PTO personnel that may be involved in the examination and further examination of this application. This reissue application has been pending for almost *four years* and has been subject to three non-final office actions and unusual delays. The most recent office action, dated January 10, 2008 introduces new rejections based on patents previously considered in the original prosecution of the underlying application as well as in this reissue application.

Applicant, like the PTO, seeks a quality, comprehensive examination so the ultimate patent issued will be accorded the highest respect in any subsequent judicial proceeding. Applicant also seeks an efficient examination so that remaining issues can be finally addressed and resolved at an early date. Therefore, applicant respectfully requests that this amendment and accompanying papers be considered by all those in the PTO concerned with its examination and that an interview be scheduled with the pertinent PTO personnel and applicant's counsel to discuss any remaining issues.

II. **RESPONSE TO OFFICE ACTION**

**A. The Objections To The Oaths/Declarations Are Overcome By
Assignee's Third Supplemental Declaration Submitted Herewith**

The claims have been objected to for a defective oath/declaration because each of the previously submitted oaths/declarations omit the words “and first” in the statement that the inventor “is the original and first inventor.” Applicant agrees to submit a “Third Supplemental Declaration” of the Assignee, which refers to the prior oaths/declarations and includes the noted phrase “and first inventor”. It is believed such a “Third Supplemental Declaration” will overcome the purported defect.

Also, the proposed Third Supplemental Declaration would incorporate and acknowledge the amendment to the claims as submitted herein, i.e,

I have reviewed and understand the contents of the ‘804 patent and the subject reissue application, including the claims as amended and added and now pending in the application and the specification, including any amendment thereto.

I believe every error in the patent which is corrected in the present reissue application and which is not covered by the prior Declaration and prior Supplemental Declarations by assignee submitted in this application, arose without any deceptive intention on the part of the applicant.

It is respectfully requested that the objection be held in abeyance pending a decision withdrawing all other rejections.

B. The Obviousness Double Patenting Rejections In The Office Action

The Office Action rejects all of the presented claims 1-8,10-17, 20-35, 37 and 38 in three separate nonstatutory obviousness-type double patenting rejections, based on the claims indicated in the following prior patents:

- (i) U.S. Patent 5665672 (“672 patent”) claims 1-19;
- (ii) U.S. Patent 5336661 (“661 patent”) claims 1-3 in view of Nesteruk et al (PL 103345); and
- (iii) US Patent No. 5643852 (“852 patent”) claims 1-40

C. The Present Amendment And Summary Of The Differences Between The Presently Pending Claims And The Claims Of The ‘661, ‘672 and ‘852 Patents

The present amendment further modifies and narrows the claims of this application by amending each of the independent claims 1, 10, 24 and 32 with language which limits the subject composition and method to exclude not only “mancozeb” (the manganese-zinc salt of ethylenebisdithiocarbamate, the active ingredient in FORE®) but also, an “ethylenebisdithiocarbamate contact fungicide”. The inserted language therefore excludes the manganese salt of ethylenebisdithiocarbamate (“maneb”) which is recited in some of the claims of the ‘672 and ‘852 patents relied upon in the rejections. This amendment therefore removes any possible suggestion that the present application claims embrace mancozeb or maneb.

The basis for the present amendment can be found in the ‘804 patent specification which refers to “ethylenebisdithiocarbamate contact fungicide” (Col. 1 lines 27-30 and Col. 7 lines 15-21) but omits any member of that class at Column 3, lines 10-30, where other fungicides are listed that can be combined with the “first active agent.”

The table below compares the present claims of the reissue application as amended herein, with the claims in the '661, '672 and '852 patents relied upon in the rejections. In the table, "X" represents a component expressly included in the indicated claims and "Excluded" means a component that is expressly excluded in the indicated claims:

	'661 Patent Claims 1-3	'672 Patent Claims 1-19	'852 Patent Claims 1-40	Present '804 Reissue Claims 1-8, 22, 10-17, 20,21 & 23	Present '804 Reissue Claims 24-35 & 37-38
manganese-zinc salt of ethylenebisdithiocarbamate ("mancozeb")*	X (All Claims)	X (All Claims)	X (All Claims)	Excluded	Excluded
Manganese salt of ethylenebisdithiocarbamate ("maneb")		X (Claims 1-4,6-19 only)	X (Claims 1-17,19-37, 39-40 only)	Excluded	Excluded
Phthalocyanine compound			X	X	X
Monoester salt of a phosphorous acid (alkali metal, alkaline earth metal or aluminum salt)**	X	X	X	X	
Phosphorous acid or alkali or alkaline earth metal salt of phosphorous acid				X	X

*Mancozeb is the active ingredient in the commercial herbicide FORE ® which also contains a phthalocyanine compound (Pigment Blue 15)

**Fosetyl Aluminum (aluminum salt of ethyl phosphite), is the active ingredient in ALLIETTE ®.

As can be seen from the above table, present application claims 24-35 and 37-38 have no component in common with the claims from the '661 and '672 patents, i.e. these pending claims contain no ethylenebisdithiocarbamate and no monoester salt of a phosphorous acid and the claims of the '661 and '672 patents do not describe a phthalocyanine compound or a phosphorous acid or salt thereof.

The above table also shows that present application claims 1-8, 22, 10-17, 20, 21

and 23 only have one component, a monoester salt of phosphorous acid, in common with the claims of the '661 and '672 patents. Therefore these patent claims differ in at least two respects from the present application claims, i.e. the removal of any ethylenebisdithiocarbamate contact fungicide while at the same time the addition of a phthalocyanine compound.

The above table also shows that the present application claims expressly exclude a fundamental active ingredient, the ethylenebisdithiocarbamate, present in all claims of the '852 patent (as well as '661 and '672 patents). As explained below, a person of ordinary skill in the art also would appreciate that the phthalocyanine compound was present in the '852 patent claims because it was an original ingredient with the ethylenebisdithiocarbamate component in the prior art commercial fungicide FORE®. The prior art FORE® fungicide contained the combination of mancozeb and pigment blue 15, a phthalocyanine compound.

Any possible argument to remove the ethylenebisdithiocarbamate component from the '852 patent claims would necessarily include removal of the phthalocyanine compound associated with it, which would run contrary to the invention of the present reissue application claims.

As discussed below, the obviousness double patenting rejections involving the '661, '672 and '852 patents are legally improper, cannot render the present application claims obvious and are less pertinent than previous rejections long ago withdrawn as lacking merit.

D. The Double Patenting Rejections Based On The ‘661 and ‘672 Patents Are Legally Defective Because There Is No Common Inventor and No Common Ownership Between These Patents and The Present Reissue Application (Mudge ‘804 Patent)

The MPEP makes clear that any double patenting rejection requires the patent[s] relied upon in the rejection to have either an overlap in at least one inventor or common ownership in the subject application. See MPEP §804.B-1.¹

Here, the ‘661 and ‘672 patents are each in the sole name of Lucas and the present reissue application is in the sole name of Mudge. The ‘661 and ‘672 patents are both assigned to North Carolina State University while the present reissue application is assigned to Bayer CropScience Inc. Even though Bayer CropScience, Inc. is a licensee under the ‘661 and ‘672 patents, that is not sufficient to establish a common ownership that provides a basis for a double patenting rejection.

Therefore, the Lucas ‘661 and ‘672 patents cannot be a basis for a double patenting rejection against the claims of the present Mudge reissue application.

E. All of the Obviousness Double Patenting Rejections Are Legally Defective Because They Rely Upon A Legally Erroneous Construction of The Patent Claims

The MPEP at §804 II.B.1. makes clear that the first step in the analysis of an obviousness double patenting rejection is determining the scope and content of the patent claim relied upon in the rejection in accordance with the controlling law of claim construction. The office action of January 10, 2008, purportedly construes the claims in each of the ‘661, 672, and

¹ While a further basis for double patenting is where the invention of the patent and application originate from the same joint research program, (35 USC §103 (c)(2) and (3) that provision is not believed here applicable or relevant because the invention and grant of these patents occurred prior to the effective date of that statute on Dec. 10, 2004. See MPEP §706.02 (2).

‘852 patents, as follows:

Although the [‘661, 672, and ‘852] patented claims do not specifically exclude mancozeb, patented claims do not make mancozeb a required component. Therefore patent claims like instant claims can be free of mancozeb.

See, Office Action at p. 3, lines 14-16, p. 2 last line to page 4, line 2 and page 4 lines 18-21.

The foregoing claim construction premise for the asserted rejections is incorrect for several reasons.

The ‘661, ‘672 and ‘852 patent claims are very different from the presently pending reissue application claims: “mancozeb” and/or “maneb” is an expressly stated element in all of the prior patent claims, whereas all ethylene bisdithiocarbamate contact fungicides (both mancozeb and maneb) are expressly excluded from all of the pending reissue claims. Patent claims must be construed according to established legal principles to include all stated elements and an element cannot be simply ignored. See *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 872 F.2d 1272, 1284-75 (Fed. Cir. 1992). The issue of double patenting is directly related to how claims can be asserted for infringement against third parties. A fundamental basis for an obviousness double patenting rejection is whether a second patent can extend the protection granted by a first patent. To infringe a patent claim, there must be proof that an accused product or method has every element of the patent claim or that an equivalent element is practiced. It is fundamental patent law that the claims of the ‘661, ‘672 and ‘852 patents cannot be construed and cannot be enforced against a method or product that fails to include an ethylenebisdithiocarbamate contact fungicide.

In addition to every element of a patent claim being significant, the claim cannot

be construed in a vacuum, but requires consideration of the pertinent portion of the patent specification containing the claim. MPEP §804 II.B.1 at 800-22, Rev. 6 Aug. 2007. Consideration of the specifications of the '661, 672, and '852 patents confirm that the ethylenebisdithiocarbamate fungicide (e.g. "mancozeb") is a necessary and essential element of the claims of the cited patents.

The '661, '672 and '852 patent specifications make clear that "mancozeb" or the bisdithiocarbamate fungicide is not merely an unimportant optional additive, but an essential and required active ingredient that cannot be read out of the claimed invention. Its function in the claimed invention is not merely as an additive component but an essential part of a synergistic combination. For example, each of these patents throughout their specifications refer only to compositions containing a "synergistic combination" which includes mancozeb or a method of treatment involving application of both mancozeb and the phosphorous component. The invention in these patents is described as, inter alia, "the synergistic combination" of the (a) monoester salt of a phosphorous acid of the noted formula and (b) a metallic ethylene bisdithiocarbamate contact fungicide. See e.g. '661 patent at: Col. 1, lines 6-10; Col. 2, lines 26-31; Col. 2, lines 38-40; Col. 2 lines 49-50; Col. 6, lines 49-57. Also see '672 patent at: Col. 1, lines 11-14, lines 31-34; Col. 2, lines 26-28, 39-41, 50-51, 55-56; Col. 7, lines 1-8. See, also, '852 patent at: Col. 1, line 14 and lines 45-46; Col. 4, lines 32-33, 47-49 and 63-64.

Legal principles of claim construction preclude the claims of the '661, 672, and '852 patent to be construed to be "free of mancozeb." The record establishes that "mancozeb" is a required element of these patent claims and there is nothing relied upon in these rejections to contradict the required presence of mancozeb or maneb in the "synergistic combination" stated in

each patent.

F. The Rejection Based On The ‘672 Patent Incorrectly Assumes That A Phthalocyanine Compound Is Described In the ‘672 Patent Claims

The present obviousness double patent rejection based on the ‘661 patent claims additionally relies upon the Nesteruk patent document to purportedly provide a suggestion to add the pigment blue compound because the ‘661 patent claims fail to contain any mention of a phthalocyanine compound or pigment blue 15. However, the ‘672 patent claims, like the ‘661 patent claims, also fail to recite any pigment blue compound or phthalocyanine. Therefore, based on the examiner’s rationale for the rejection based on the ‘661 patent claims, the rejection based on the ‘672 patent claims should also rely upon the Nesteruk reference. The examiner’s own logic regarding the ‘661 patent renders the present rejection based on the ‘672 patent fatally defective.

G. The Obviousness Rejection Based On The Claims Of The ‘852 Patent Is Also Contrary to The State Of The Art And Fails To Overcome The Significant Differences Between the ‘852 Patent Claims And The Claims Of This Application

In this obviousness double patenting rejection no prior art is relied upon in combination with the claims of the ‘852 patent². To support the obviousness double patenting rejection based on the ‘852 patent, two important modifications to the claims of the ‘852 patent must be made: elimination of the required fungicide active ingredient ethylenebisdithiocarbamate salt and continued inclusion of the phthalocyanine compound . As discussed above, eliminating the ethylenebisdithiocarbamate component is directly contrary to the invention defined in these

² It is noted that the term of the Mudge ‘804 patent cannot extend beyond the term of the ‘852 patent because it expires on Feb. 14, 2014 (17 years after its issuance on 2-4-1997) which is prior to the expiration of the ‘852 patent which expires July 1, 2014.

claims, because its presence is part of a “synergistic mixture.” The rejection is therefore premised on an incorrect claim construction that “the patented claims do not make mancozeb [or maneb] a required component.” The claims of the ‘852 patent could not be found to be infringed by a composition or method that fails to include an ethylenebisdithiocarbamate contact fungicide.

If one followed the examiner’s assertion (upon which applicant disagrees) that a person of ordinary skill in the art would consider it obvious to remove ethylenebisdithiocarbamate compound from the claims of the ‘852 patent, such a skilled artisan would have also removed the phthalocyanine compound. There is no basis in this rejection to retain or maintain a phthalocyanine compound in the claims when the ethylenebisdithiocarbamate salt is eliminated.

The claims must be considered by a person of ordinary skill in the art who would be informed of the known commercial fungicide FORE® as containing the active ingredient mancozeb and pigment blue 15 (a phthalocyanine compound) . FORE® is described in the ‘852 patent at Col. 7 lines 4-5. The claims of the ‘852 patent reflect the mixture of two prior art commercial fungicides, the FORE® fungicide and the ALLIETTE® fungicide, described in the ‘852 patent and ‘672 patent. ALLIETTE® is described as containing the aluminum salt of ethyl phosphite and is not described as containing a pigment or colorant. See ‘852 patent at Col. 6 lines 67 to Col. 7 line 1. A similar disclosure appears in the ‘672 patent. It would not have been obvious to a person of ordinary skill in the art in considering the ‘852 patent claims to remove the mancozeb portion of FORE® and to leave the Pigment Blue 15 portion of FORE®.

As concluded in the original prosecution for the ‘804 patent and in this reissue application, the prior art does not suggest the addition of a phthalocyanine compound to the

phosphorous acid, phosphorous acid salt or phosphorous acid ester fungicides of the present claims in the absence of an ethylenebisdithiocarbamate fungicide. Present reliance upon the claims of the '852 patent does not create a basis for a rejection that is not supported by the prior art.

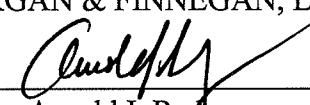
CONCLUSION

For the reasons stated above, it is respectfully requested that all rejections be withdrawn. Upon such notification, a new oath/declaration as described above will be submitted. If the claims are not found allowable subject to submission of the new oath/declaration, then applicant requests a conference to be conducted as described above.

Respectfully submitted,

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Attachments: Pages 16-24, "Status Of Claims 1-38 Pursuant To 37 CFR §1.173(d)"